

What is claimed is:

1. A composition comprising an effective amount of monoclonal antibody 8H9 or a derivative thereof and a suitable carrier.
2. A pharmaceutical composition comprising an effective amount of monoclonal antibody 8H9 or a derivative thereof and a pharmaceutically acceptable carrier.
3. The composition of claim 1 or 2, wherein the derivative is a scFv.
4. The composition of claim 3, wherein the antibody is an antibody-fusion construct.
5. The composition of claim 4, wherein the antibody is an scFvFc.
6. An antibody other than the monoclonal antibody 8H9 comprising the complementary determining regions of monoclonal antibody 8H9 or a derivative thereof, capable of binding to the same antigen as the monoclonal antibody 8H9.
7. A substance capable of competitively inhibiting the binding of monoclonal antibody 8H9.
8. The substance of claim 7, which is an antibody.
9. An isolated scFv of monoclonal antibody 8H9 or a derivative thereof.
10. The isolated scFv of claim 9, wherein the scFv is directly or indirectly coupled to a cytotoxic agent.
11. A cell comprising 8H9-scFv.
12. The cell of claim 11, which is a red cell.

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24. A method for producing the protein which binds to the monoclonal antibody 8H9 comprising cloning the nucleic acid molecule of claim 19 in an appropriate vector, expressing said protein in appropriate cells and recovery of said expressed protein.

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25. A method for production of antibody using the protein produced by the method of claim 24.

26. The antibody produced by the method of claim 25.

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27. The antibody of claim 26, wherein the antibody is a monoclonal.

28. A method of inhibiting the growth of tumor cells comprising contacting said tumor cells with an appropriate amount of monoclonal antibody 8H9 or a derivative thereof, or the antibody of claim 26 or a derivative thereof.

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29. A method of inhibiting the growth of tumor cells in a subject comprising administering to the subject an appropriate amount of monoclonal antibody 8H9 or a derivative thereof, or the antibody of claim 26 or a derivative thereof.

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30. A method for imaging a tumor in a subject comprising administering to the subject a labeled monoclonal antibody 8H9 or a labeled derivatives, or a labeled antibody of claim 26 or a labeled derivative.

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31. A method of reducing tumor cells in a subject comprising administering to the subject monoclonal antibody 8H9 or a derivative thereof, or a monoclonal antibody of claim 27 or a derivative thereof wherein the antibody or derivative is coupled to a cytotoxic agent to the subject.

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32. The method of claim 37, wherein the coupling to a cytotoxic agent is indirect.

33. The method of claim 37, wherein the coupling is to link the antibody or derivative with a first protein capable of binding to a second protein and the second protein is covalently coupled to a cytotoxic agent.

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34. The method of claim 31, wherein the cytotoxic agent is a radioisotope.

35. A method to evaluate the tumor bearing potential of a subject comprising measuring the expression the 8H9 antigen in the subject, wherein the increased expression of said antigen indicates higher tumor bearing potential of the subject.

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36. A transgenic animal comprising an exogenous gene encoding the 8H9 antigen.

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37. The transgenic animal wherein the gene encoding the 8H9 mouse analogous antigen has been knocked out.

38. The transgenic mouse of claim 36.

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39. A method to screening new anti-tumor compound comprising contacting the transgenic animal of claim 36 with the tested compound and measuring the level of expression of the 8H9 antigen in said transgenic animal, a decrease in the level of expression indicating that the compound can inhibit the expression of the 8H9 antigen and is a anti-tumor candidate.

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